



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Basford, William C.)
Filing Date: June 8, 2001)
Serial No.: 09/877,585)
For:)
AERODYNAMIC COMBINATION FOR)
IMPROVED BASE DRAG REDUCTION)
(Amended))
-----)
Patent Examiner:)
Patel, Kiran B.)
ART UNIT: 3612)
July 26, 2003)
25
Hallowell, Maine)
Zip: 04347)

DECLARATION UNDER 37 CFR SECTION 1.132

Honorable Commissioner of
Patents and Trademarks
Washington, D.D. 20231

Dear Sir:

William Basford, being duly sworn testifies and states as follows:

1. This declaration is provided to support the patentability of my invention, together with providing support for a change of examiners for my Utility Patent Application identified above and currently assigned to Examiner Kiran Patel. I hereby acknowledge and reaffirm the contents of my earlier Declaration signed on March 29, 2003. In my earlier Declaration I set forth my Engineering expertise, work experience, background development and novelty and unexpected advantages of my invention over the known and cited art.

In this Declaration I refer to myself as the applicant and I hereinafter list six reasons why Examiner Patel is unqualified to examine the subject utility patent application.

2. It is my considered opinion that Examiner Patel apparently has little or no working knowledge of patent practice and case law regarding so called combination patents. During his first phone call to the applicant during the summer of 2002, Examiner Patel clearly stated that a patent could not be allowed if either of

the component methods or devices for base drag reduction was previously known. In a second phone call the next day he stated that one of the component methods or devices could be previously known but that the other must be new. Later, he stated that both of the components could be previously known, but that at least one must be changed in some way.

Because of the apparent simplicity of my invention, I had previously researched this issue of combination patents to make sure that I had a patentable invention, before spending the time to prepare two Provisional Patent Applications and a Regular Patent Application for this invention. Therefore, I immediately recognized that all three of Examiner Patel's statements were contradicted by descriptions of combination patents in other readily available sources, and that that each of his three statements conflicted with the other two.

For example, in the book "Patent it Yourself" by David Pressman (Nolo.com, Seventh Edition, February 2000), on page 5-18, at the bottom of column one, under the heading "Secondary Factors in Determining Unobviousness of Combination Inventions" we find the following statement:

Inventions that combine two or more elements known in the prior art can still be held patentable, provided that the combination can be considered unobvious - that is, it's a new combination and it produces new and unexpected results.

The author then went on for another two full pages to discuss nine secondary factors in determining non-obviousness.

In another example, a quick internet search on Google turned up the following statement on the web site of IP attorneys Bowie and Jensen, LLC, of Towson, MD.

A combination patent is an invention that uses two or more previously well known elements and combines them to form a new product or device.

(Please see "<http://www.bowie-jensen.com/>")

In still another example, on another web site we find the statement:

The Supreme Court has used the term 'combination patent' to describe a patent for an invention whose novelty lies in a new combination of known elements. Thus, it is the interrelationship of the known components that is the subject of the patent.

(Please see "<http://www.biojudiciary.org/subpage1.asp?tid=158>")

Furthermore, although Examiner Patel's three statements clearly conflicted with each other, at no time did he acknowledge the differences between his three statements, or even acknowledge that he had made the prior contradictory statements.

Therefore, unless we assume that Examiner Patel deliberately made false statements to an applicant, we are forced to conclude that he lacks sufficient working knowledge of patent practice and case law on combination patents, and is therefore unqualified to examine an application for a combination patent.

3. Because the patentability of the subject invention depends on the definition of a combination patent, this issue alone is sufficient to cause the applicant to lose all confidence in the examiner; but there are more issues and reasons why the Examiner should be changed for an impartial review of my invention. I must conclude that Examiner Patel apparently has little or no working knowledge in the field of the Aerodynamics of Bluff Bodies, and moreover, find that he is unfamiliar with the standard terminology used in this field of art.

In the office actions received from Examiner Patel, he has made several statements which reveal beyond any doubt, that he has little or no knowledge of aerodynamics. For example, in his second Office Action of Sept. 24, 2002, starting on the fifth line from the bottom on page 7, he made the statement:

It is not clear what is claimed as invention because elected Fig. 8 contains a truck body not a bluff body. The truck body has six (sides) flat base surfaces not one.

However, anyone familiar with this art would surely know that a truck body is a bluff body, and that, in terms of aerodynamics, the base surface is always the rearmost surface of the bluff body. In the field of aerodynamics, a bluff body is, by definition, any body where the pressure drag, which includes both forebody drag and afterbody or base drag, is greater than the skin friction drag. By this definition all common highway trucks of the type shown in my specification are bluff bodies.

In a second example, in the second office action, Examiner Patel stated on page 7 that claims 5-18 were rejected as being indefinite, and provided many underlined examples over the next three pages of terminology that he considered vague or indefinite.

But after I hired a patent attorney and with the attorney's help, wrote all new claims, claims 19 through 35, the examiner again stated in the third Office Action that the claims were indefinite. At this point it became evident that the claims are not vague or indefinite, and that the main problem is instead that the examiner is simply not conversant with the standard technical terminology used in the field of the Aerodynamics of Bluff Bodies. Terms such as base drag, base surface, boundary layer, trailing edge, separated shear surface, and low pressure wake, all have specific meanings that are well recognized, well understood and commonly used by all artisans working in the field of aerodynamic drag reduction.

The claims were carefully written using this standard technical terminology in order to clearly, concisely and unambiguously describe the invention to people of ordinary skill in this art field. In addition, please note that the invention is described in

simpler language, for the benefit of persons less familiar with the technical language, in both the brief summary and abstract of the invention.

In a third example, Examiner Patel provided further evidence of his lack of knowledge of aerodynamics during one telephone call in the summer of 2002, when he stated that the patent application should be written so that it could be easily understood by a typical welder. However, the invention does not disclose any advances in the field of welding, and all the parts of the current invention can easily be made without requiring any welding.

Only later did it become apparent that the examiner wanted the invention described in very simple terms, terms that could be understood by a typical high school graduate with no knowledge of aerodynamics, apparently because the examiner himself did not recognize or understand the standard terminology routinely used in the field of aerodynamics.

4. Compounding his lack of knowledge of aerodynamics, Examiner Patel has failed to make use of the technical information provided in the application itself and the technical references submitted with the Invention Disclosure Statement ("IDS"). Applicant went to great lengths to provide the background information needed for readers to understand the application, both in the application itself and the various references that were explained in the specification. Note for example, that pages 3 through 5 of the original application provide brief descriptions of several of the most relevant technical principles, including the "jet pump mechanism" which causes base drag, "Hoerner's Law", and the "low pressure wake". Furthermore, Fig. 1 in my drawing was provided to help describe how base drag is created, how fluid flow pattern results in a large recirculation bubble on the base surface, and that Figure 1 also identifies the boundary layers 23, the trailing edges 24, the base surface 25, the separated shear surfaces 26, all of which define the limits of the low pressure wake, etc.

Also, please note that my referenced citation 11 in the IDS refers to complete chapters from the book "Fluid-dynamic Drag" by Sighard Hoerner, which book is still considered by many to be the definitive work on aerodynamic drag, including Chapter 2 on boundary layers, Chapter 3 on pressure drag, including base drag, and chapter 12 which deals specifically with the aerodynamics of land vehicles. However, Examiner Patel has failed to make use of any of these resources or he would not be asking the questions he has asked.

Because Examiner Patel has insufficient knowledge of the field, and has not made use of the technical information provided by the applicant, it is my opinion that he is unqualified to examine the subject application.

5. Examiner Patel has apparently not made a good faith effort to understand the invention, or comprehend the entire Regular Patent Application of June 8, 2001, applicant's Declaration of March 19, 2003, or the amendment dated 20 March 2003. Only one example need be set forth to illustrate this point.

Near the middle of page 4 in the most recent Office Action of May 27, 2003, Examiner Patel stated:

It is not clear between claim 26 and claim 27 whether applicant is claiming three or four boattails. (Emphasis Added.)

First, please note that Examiner Patel should be using the term "boattail plates" instead of boattails. The two structurally and functionally are much different and the two should not be confused. Second, claim 26 says that four boattail plates are to be used on a bluff body fully immersed in a fluid, while claim 27 says that only three boattail plates are needed on a land vehicle. How could this be made any clearer? It therefore, appears that either Examiner Patel has not read the claims carefully, or does not understand the differences or, perhaps, he is being deliberately difficult and disagreeable.

A second example: Please see the examiner's statement on page 11 in the second Office Action of Sept. 24, 2002, where it is stated that "Claims 5-10, 13, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Switlik '059, in view of Wheeler '837."

In response, applicant prepared a declaration which pointed out, among other things, that the boattail plates shown in Figs 1-17 of Switlik '059, clearly fall within the scope of Bilanin '808, and that the only new material claimed in Switlik '059 deals with the manner of folding the boattail plates to make them easier to use.

Nevertheless, in the most recent Office Action of 27 May 2003, Examiner Patel repeats almost word for word his previous rejection, changing only the claim numbers, with the statement; "Claims 26-29, 31-35, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Switlik '059 in view of Wheeler '837."

This obvious word-by-word repetition by Examiner Patel suggests that he has never read applicant's first Declaration of 19 March 2003 which was carefully written, clearly and concisely, to respond to the examiner's mistake in the previous Office Action of Sept. 24, 2002.

6. In his rejection under obviousness, on page 4 of the recent Office Action of May 27, 2003, it appears that Examiner Patel still does not understand the goals and objectives of this invention and of other related disclosures of the prior art.

In his rejection, Examiner Patel stated:

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device, as disclosed by Switlik '059, to include a plurality of vortex generators, as

disclosed by Wheeler '837, to achieve the desire level of base drag reduction for the bluff body." (Emphasis Added)

For all inventions intended to reduce the base drag of bluff bodies, including highway vehicles, the desired level of base drag reduction is obviously the maximum possible base drag reduction within legal limitations and other practical constraints such as cost and ease of use. Since the subject invention provides roughly 50% greater base drag reduction than either Bilanin's boattail plates or Wheeler's low drag vortex generators when used alone, while simultaneously reducing the optimum length of the boattail plates by roughly half, it would be obvious to anyone with ordinary skill in the art, that Bilanin, Switlik, or Wheeler, or more probably all three, would have disclosed and claimed this combination in their patent applications, if they had been aware of its far greater benefits. Moreover, if they already knew, or even had any suspicion, that their invention could be used in combination with another known invention to produce far greater benefits, they would have been foolish to not disclose it and claim it.

Furthermore, standard patent practice requires full disclosure by every applicant, so applicants are not allowed to conceal known combinations which would provide greater base drag reduction at lower cost. No such disclosure, claim or suggestion is made in this art.

Since Examiner Patel does not understand the goals or significance of the subject invention, and has ignored attempts by the applicant to clarify these issues, he is unqualified to examine the subject application. Additionally, he refuses to acknowledge or admit the clear inadequacies of the art that he relies upon in repeating his rejections.

7. Examiner Patel has been very difficult to work with, both to the applicant and to the applicant's patent attorney. For example, because of Examiner Patel's incorrect statements about combination patents, as described in section one above, which changed from one day to the next, the applicant concluded that all further communications should be in writing so that they would be well documented.

In a second example, during one of Examiner Patel's phone calls to the applicant in the summer of 2002, he pressed the applicant to hire a patent attorney, and to send in a complete amendment the very next day, which is clearly unreasonable.

In a third example, in each and every phone call, the examiner has stressed how little time he has for examining applications, and has implied that he was doing the applicant a great favor by looking at the application at all. This attitude is unacceptable. As an applicant, I have described and claimed my invention in as clear and concise terms as possible. Moreover, consistent with the requirement for full disclosure, I have provided information on the most relevant prior art, and all the needed technical background information. And I have paid all the required fees. In return, the examiner should make a good faith effort to fully understand and examine the application.

8. In a fourth example, early one morning in April, 2003 several weeks after the amendment of 20 March 2003 was submitted, applicant received an irate phone call from Examiner Patel, who was clearly very displeased because he could not find the phone number for Attorney Jones in the first place he had looked for it. I provided the Attorney's phone number and the examiner later called Mr. Jones on the telephone. Nevertheless, Examiner Patel's most recent Office Action, dated May 27, 2003, was mailed by the examiner to the applicant at an old address, even though a Power of Attorney was included with the amendment/response prepared by attorney Stanley Jones on March 20, 2003. As a direct result, applicant did not receive the Office Action until Saturday, June 7, 2003, and applicant's attorney did not receive the Office Action until Tuesday, June 10, 2003, two weeks after it was mailed from the patent office.

9. In a fifth example, although the applicant prepared a Declaration that was submitted along with the response of 20 March 2003, Examiner Patel has not acknowledged receipt of this declaration, and apparently has not read it, even though the applicant spent several days making the declaration as clear and concise as possible, in an effort to help the examiner better understand the application.

I have now set forth my advances over the prior art in my applications - provisional and non-provisional; in my earlier Declaration and in the Amendment of 20 March 2003 and again herein in this Declaration together with the accompanying Amendment. I have repeatedly distinguished my invention from the prior art proposed in the Patel Office Actions.

10. Nowhere in such prior art combinations do I find any disclosure or suggestion that would normally lead one of ordinary skill in the drag reduction field to my invention. The combination proposed by the Examiner, in my opinion leads away rather than toward my invention. Even if - purely for the sake of argument and contrary to what the references suggest - the Switlik '059 and Wheeler '837 patents were combined as the Examiner suggests - the result is still not what I have advanced, taught and claimed as my invention. Indeed, my invention is for a combination that is nowhere taught or suggested by either reference whether taken alone or in combination.

11. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further, these statements are made with knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both or under §1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application for any patent issuing thereon.

12. In view of the foregoing reasons, I urge that Examiner Patel must reconsider his bases for the rejection if he were to continue in an Examining capacity relative to my invention. I strongly urge, petition and request that Examiner Patel be relieved from further examination of this application. I feel strongly that Mr. Patel may have been adversely biased against my invention simply because I was originally

acting without the initial benefit of a Patent Attorney. Now that I have followed his recommendation and sought Patent Attorney assistance, Mr. Patel nevertheless refuses to reconsider his initial positions. My invention is patentable over the art and I have distinctly and clearly claimed what all of the known art fails to show, disclose or suggest.

13. I request that Mr. Patel's Supervisor, Mr. Glenn Dayoan, remove Mr. Patel from further examination efforts in my application. Additionally, I request a conference call between Messrs. Stan Jones, myself, Mr. Patel and Mr. Dayoan so that the premature "final rejection" may be removed and a new Examiner may be appointed. This Declaration is not being submitted for purposes of delay, but rather is made in good faith because I do not yet believe I have received a fair or impartial Examination relative to my invention.

Dated: July 25, 2003
By: William C. Basford
William C. Basford